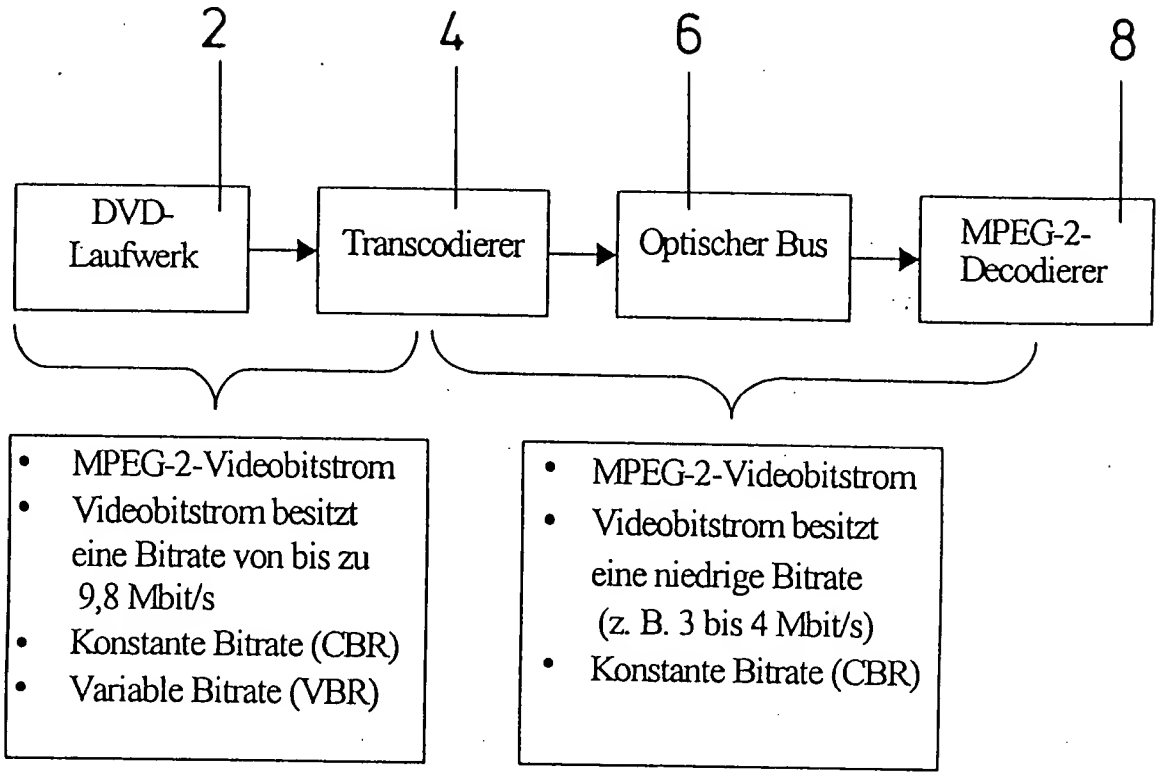
FIG 1


2
4
6
8
DVD-Laufwerk
Transcodierer
Optischer Bus
MPEG-2-Decodierer
• MPEG-2-Videobitstrom
• Videobitstrom besitzt eine Bitrate von bis zu 9,8 Mbit/s
• Konstante Bitrate (CBR)
• Variable Bitrate (VBR)
• MPEG-2-Videobitstrom
• Videobitstrom besitzt eine niedrige Bitrate (z. B. 3 bis 4 Mbit/s)
• Konstante Bitrate (CBR)

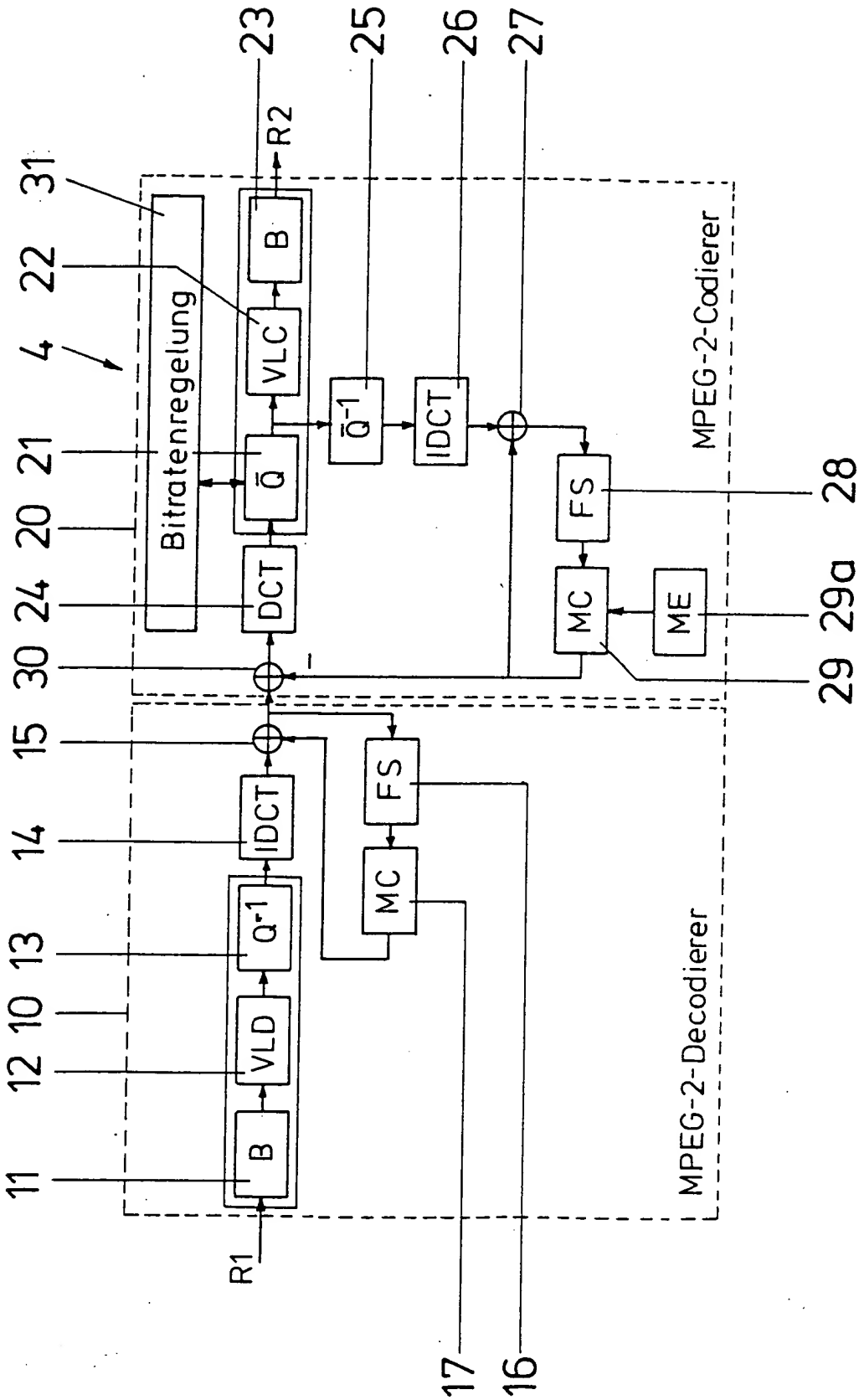

MPEG-2-Codierer
MPEG-2-Decodierer
Bitratenregelung
B
VLC
Q
DCT
Q^{-1}
IDCT
FS
MC
ME
VLD
R1
R2
11
12
10
13
14
15
30
24
20
21
4
22
31
23
25
26
27
28
29
29a
17
16

FIG 2

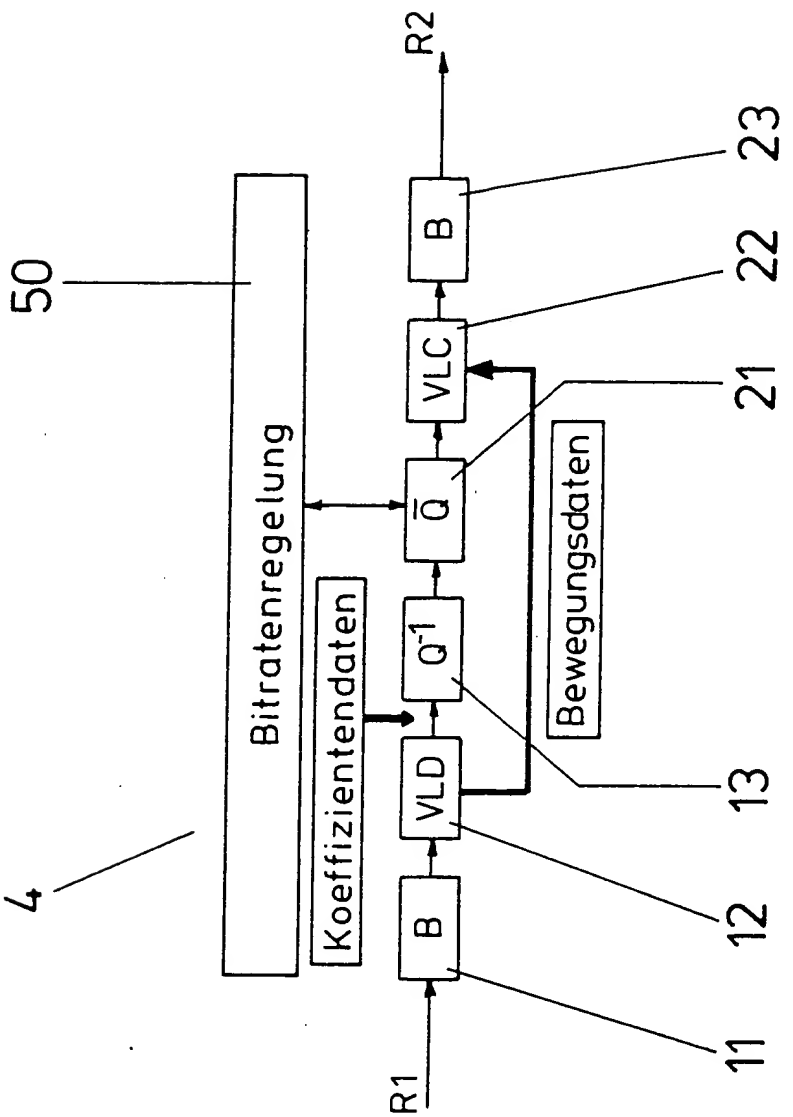

50
4
Bitratenregelung
Koeffizientendaten
Bewegungsdaten
B
VLD
Q^{-1}
$\bar{Q}$
VLC
B
R1
R2
11
12
13
21
22
23

FIG 3

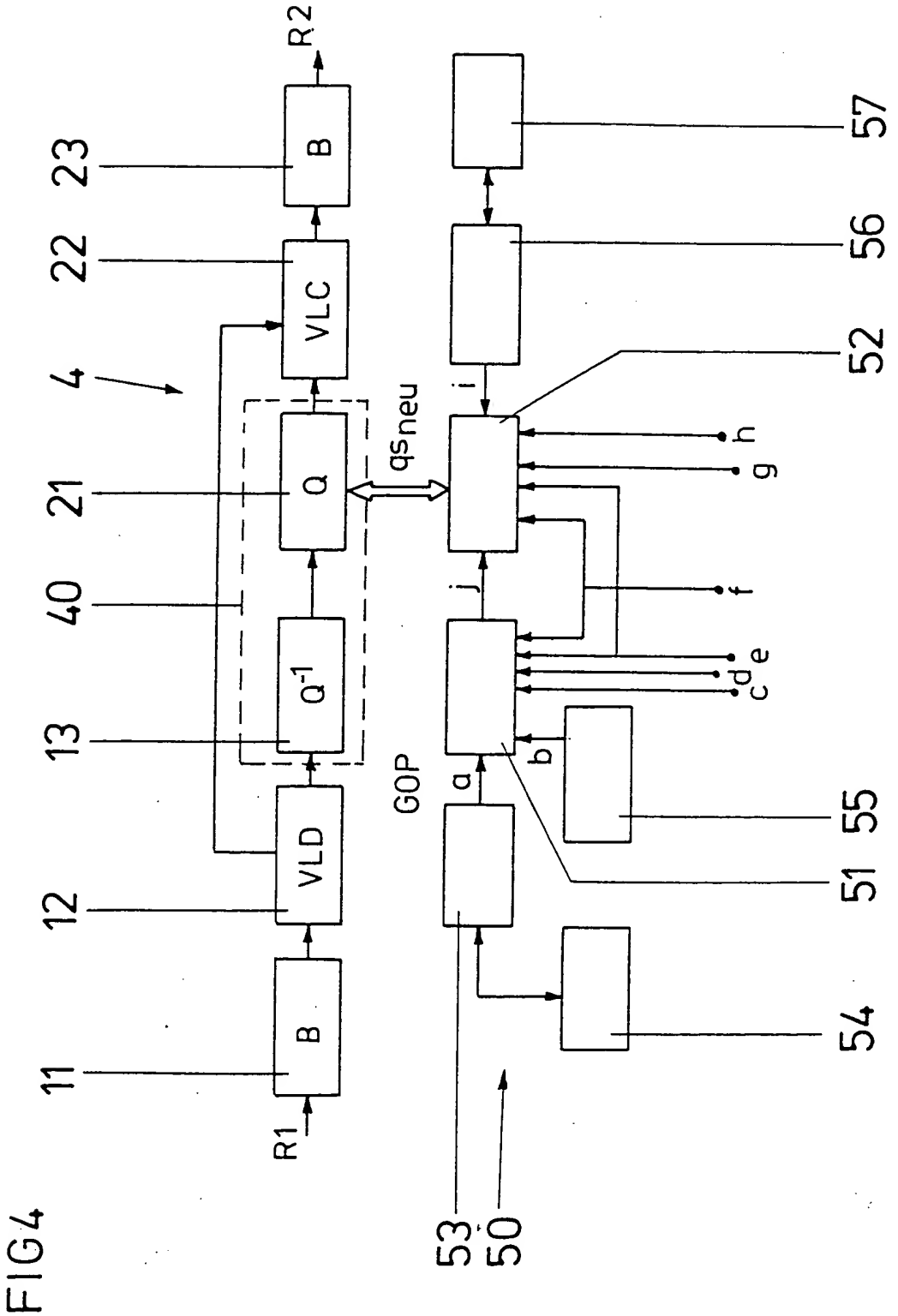

R2
B
VLC
Q
Q^{-1}
VLD
B
R1
11
12
13
40
21
22
23
4
qs_{neu}
GOP
a
b
c
d
e
f
g
h
i
j
51
52
53
54
55
56
57
50

FIG4

FIG 5

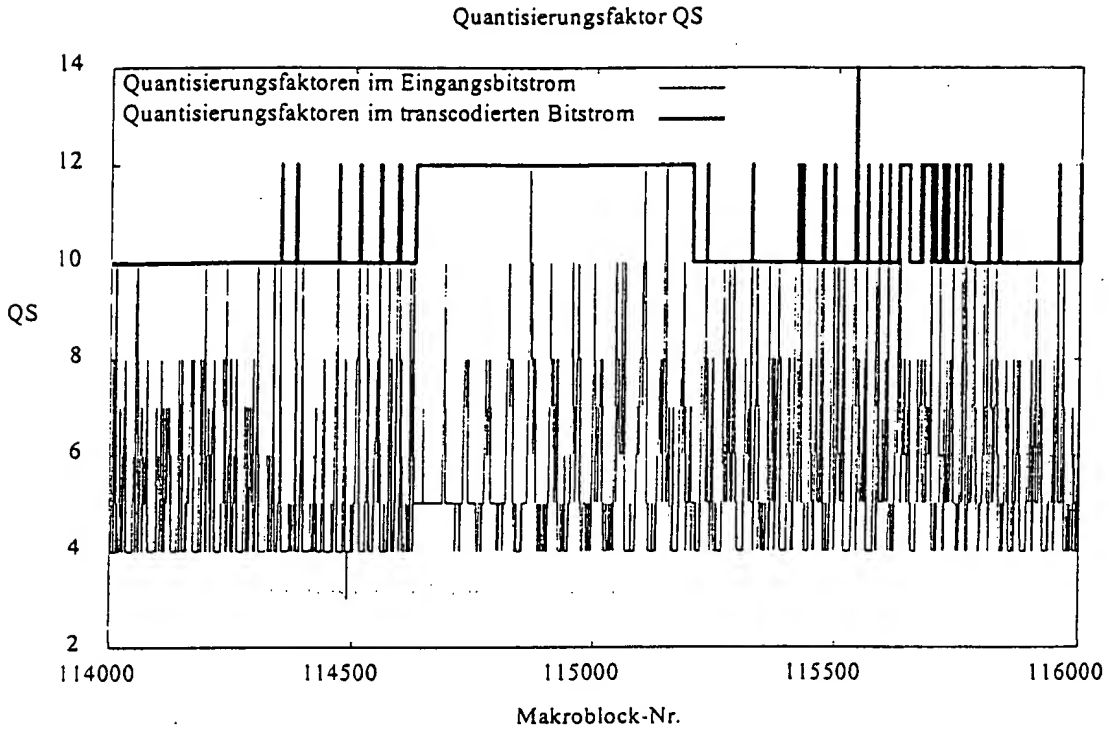

Quantisierungsfaktor QS
Quantisierungsfaktoren im Eingangsbitstrom
Quantisierungsfaktoren im transcodierten Bitstrom
QS
14
12
10
8
6
4
2
114000
114500
115000
115500
116000
Makroblock-Nr.

FIG 6

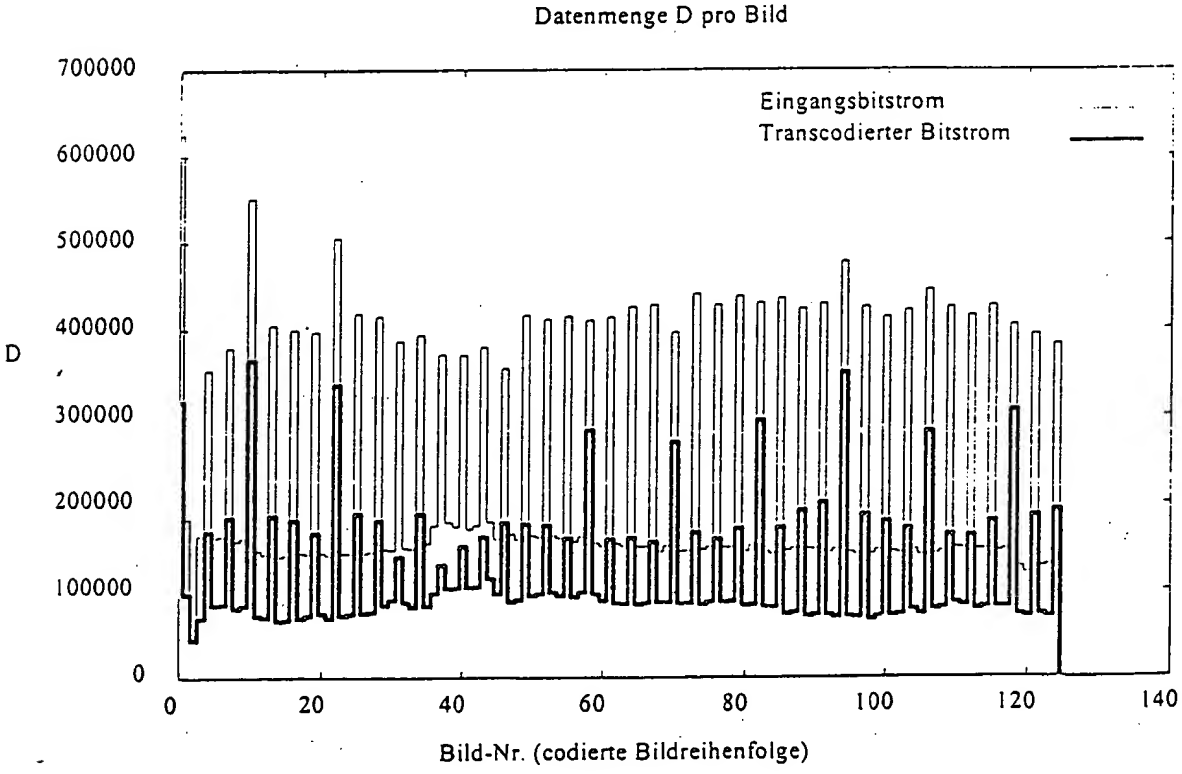

Datenmenge D pro Bild
Eingangsbitstrom
Transcodierter Bitstrom
D
700000
600000
500000
400000
300000
200000
100000
0
0
20
40
60
80
100
120
140
Bild-Nr. (codierte Bildreihenfolge)

FIG 7

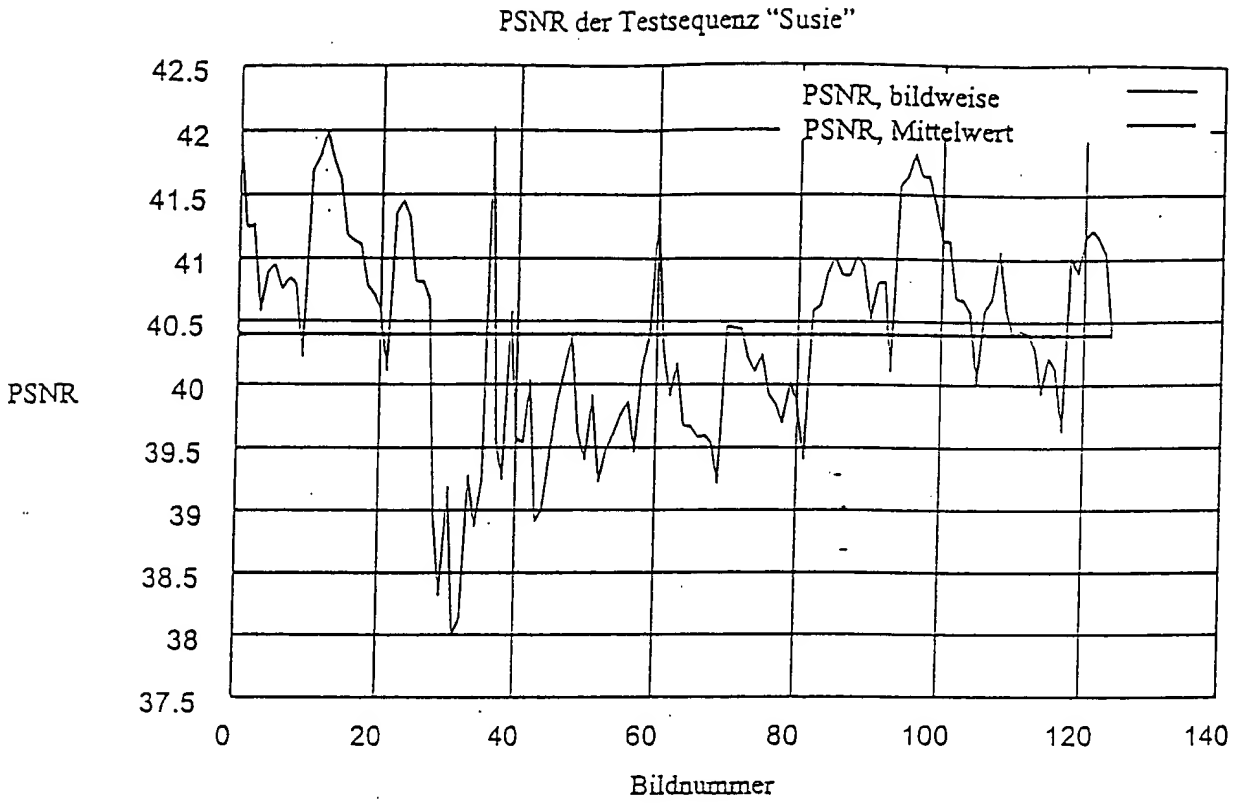
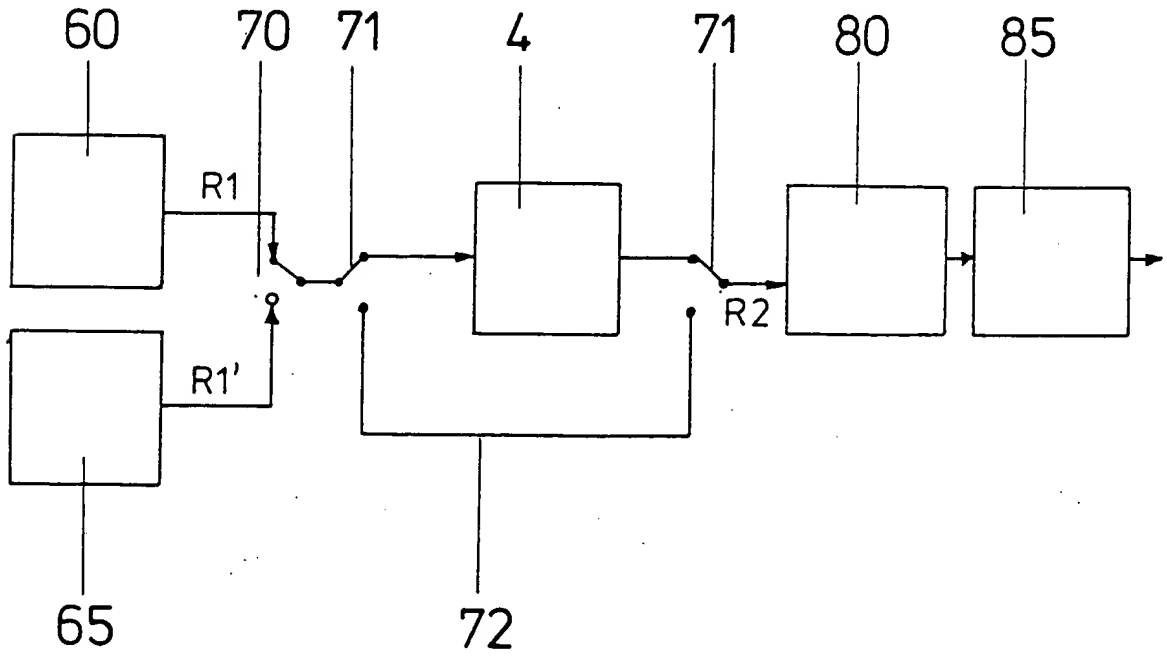

PSNR der Testsequenz "Susie"
PSNR, bildweise
PSNR, Mittelwert
PSNR
42.5
42
41.5
41
40.5
40
39.5
39
38.5
38
37.5
0
20
40
60
80
100
120
140
Bildnummer

FIG 8


60
70
71
4
71
80
85
R1
R1'
R2
65
72

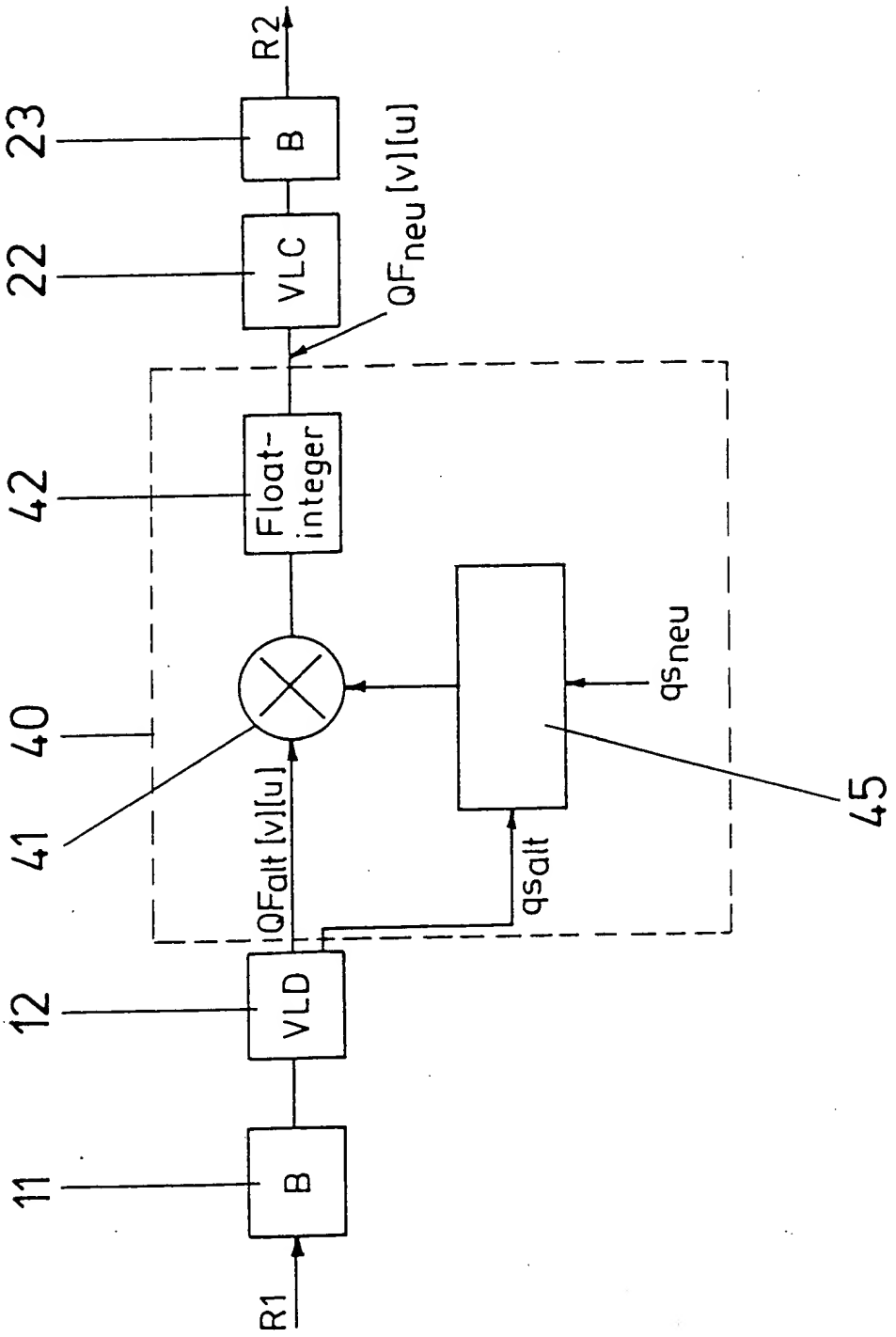

R1
B
11
VLD
12
IQFalt [v][u]
41
40
Float-integer
42
VLC
22
B
23
R2
QFneu [v][u]
qsneu
qsalt
45

FIG 9

0042680"8626960

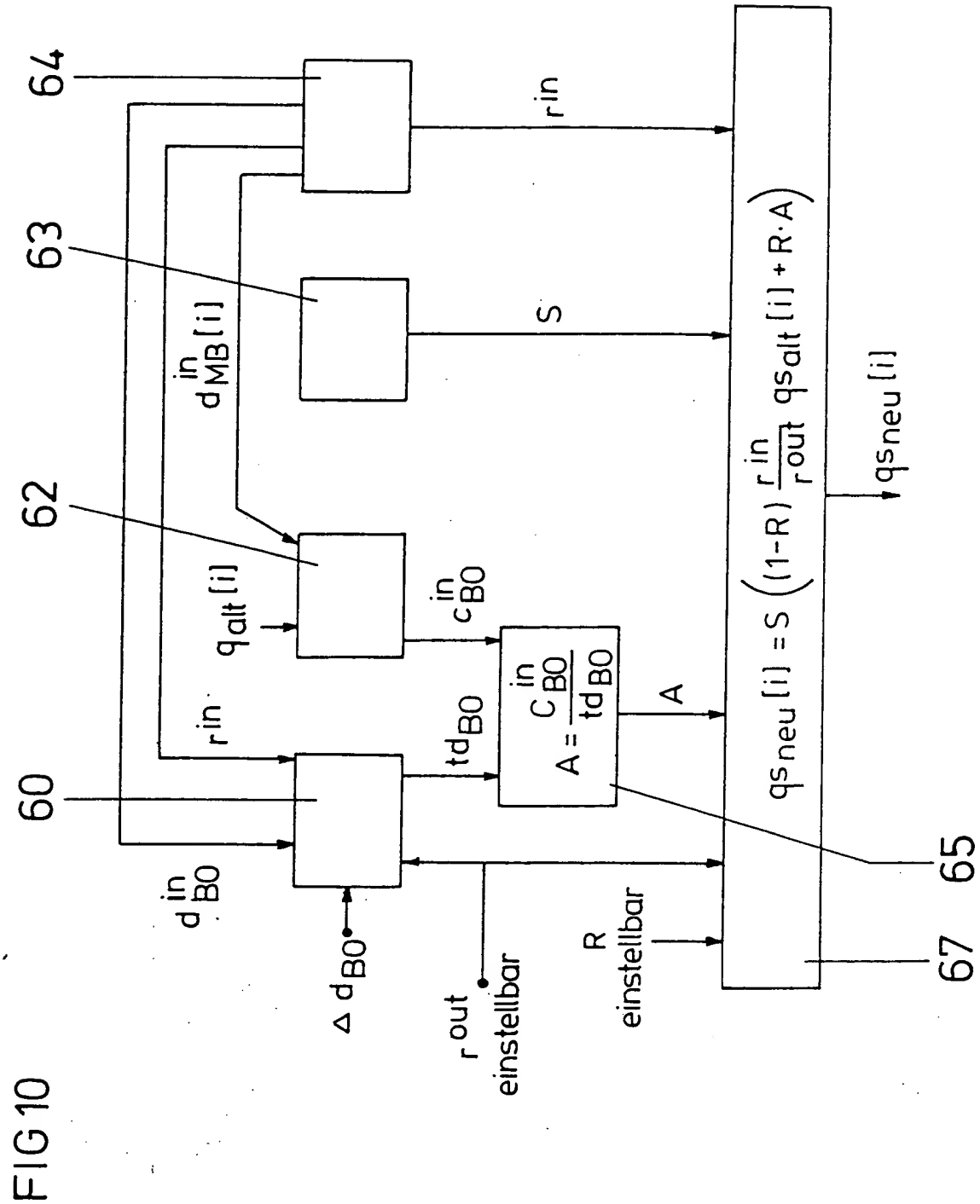


FIG 10